

REMARKS

Claims pending in the instant application are 1-33. Claims 1-33 presently stand rejected. Claims 1-4, 8-16, 19, 21-26, 28, 30 and 33 have been amended. Claims 10, 21 and 22 include amendments to correct inadvertent typographical errors in the reply to the previous Office Action (mailed December 4, 2002). The Applicant respectfully requests reconsideration of the present application in view of the amendments and the following remarks.

Summary of Examiner Interview

The Applicant's representative held a telephone interview with the Examiner regarding the instant Office Action on May 20, 2003. In the telephone interview, the Applicant's representative and the Examiner discussed whether Sesko disclosed "said reflector positioned remotely from said thermally conductive substrate and said thermoelectric controller to allow said thermoelectric controller to thermally control said gain medium and said optical output assembly independently from said reflector." The Examiner stated that amendments to further define that the reflector is mounted on a second substrate thermally independent from the first substrate would overcome Sesko, but may raise issues requiring further search. Amendments to this end are provided herewith.

The Applicant's representative and the Examiner also discussed whether Fee disclosed "an optical output assembly optically coupled to said gain medium, the optical output assembly to optically couple an optical signal from the output facet of the gain medium to an optical fiber." The Examiner stated amendments



to further define "output assembly" would overcome Fee, but may raise issues requiring further search. Amendments to this end are provided herewith.

35 U.S.C. § 102 Rejections

In the March 26, 2003 Office Action, claim 30-33 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fee, U.S. Patent Number 5,943,352.

Claim 30 as presently amended expressly recites

"the optical output assembly comprising:

a collimating lens optically coupled to said output facet of said gain medium; and

a fiber focus lens optically coupled between said collimating lens and said optical fiber" (emphasis added).

Fee discloses a laser diode 302 that includes a light producing element 124 and a reflective output device 126 (col. 5, lines 49-51). Light from the light producing element 124 is reflected back and forth between the stable switched multifrequency source 104 and the reflective output device 126 until the light reaches sufficient intensity to be outputted as optical output signal 118 (col. 3, lines 57-67 and col. 4, lines 1-7; col. 7, lines 55-65). The Applicant submits that the reflective output device 126 of Fee serves is an output facet of the laser diode 302. However, Fee fails to disclose, teach or fairly suggest an "optical output assembly comprising: a collimating lens" and "a fiber focus lens" as expressly claimed in the Applicant's invention.

Therefore, since at least one of the expressly recited elements of the presently claimed invention is not disclosed, taught, or fairly suggested in Fee,



the Applicant submits that the presently claimed invention is not anticipated by Fee. Claims 31-33 are dependent claims and distinguish over the Fee for at least the same reasons as independent claim 30 in addition to adding further limitations of their own. Accordingly, the Applicant respectfully requests that the Examiner reconsider and withdraw the § 102 rejections to claims 30-33.

35 U.S.C. § 103 Rejections

In the March 26, 2003 Office Action, claims 1-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sesko et al., U.S. Patent Number 6,205,159.

Claim 1 as presently amended expressly recites a "gain medium and said optical output assembly mounted on said first thermally conductive substrate" and a "reflector mounted on a second substrate, said second substrate thermally isolated from said first thermally conductive substrate and thermally controlled independently from said first thermally conductive substrate" (emphasis added).

Sesko is directed to a liquid crystal tuned external cavity laser. Sesko discloses that the entire cavity is temperature controlled to have a repeatable system (col. 13, lines 11-12). Sesko also discloses a temperature control servo to maintain a temperature stability of 0.1K over the bulk cavity and 10mK for the laser diode (col. 13, lines 15-18). However, Sesko fails to disclose, teach, or fairly suggest the Applicant's expressly recited limitation of the "gain medium and said optical output assembly mounted on said first thermally conductive substrate" and a "reflector mounted on a second substrate, said second



substrate thermally isolated from said first thermally conductive substrate and thermally controlled independently from said first thermally conductive substrate" as expressly claimed in the Applicant's invention.

Also, there is no suggestion or motivation in Sesko to modify the reference to teach a "second substrate thermally isolated from said first thermally conductive substrate and thermally controlled independently from said first thermally conductive substrate" as expressly claimed in the Applicant's invention. Sesko describes tuning an external cavity laser through a combination of a liquid crystal Fabry-Perot interferometer and a static etalon. The etalon and the laser diode can be tuned via temperature control (col. 5, lines 60-61 and col. 7, lines 57-59). In contrast, the claimed invention thermally isolates the gain medium and the optical output assembly from the other laser components. This thermal isolation is for optical alignment of the gain medium and optical output assembly via temperature control and not to tune the laser as described by Sesko (see Applicant's specification, paragraphs 6 and 50). Thus, there is no suggestion or motivation to modify the tuning of Sesko to attain the optical alignment mechanism of the presently claimed invention.

The Applicant's independent claims 14, 23, 25, 26, 28, and 30 distinguish over Sesko for the same reasons as claim 1. Claims 2-13, 15-22, 24, 27, 29 and 31-33 are dependent claims and distinguish over the cited reference for at least the same reasons as their respective independent claims in addition to adding further limitations of their own. Therefore, the Applicant respectfully requests that the Examiner reconsider and withdraw the § 103 rejections to claims 1-33.



CONCLUSION

The Applicant submits that in view of the amendments and remarks set forth herein, all instant rejections have been overcome. Therefore, the Applicant respectfully requests the Examiner to reconsider and withdraw all presently outstanding rejections and issue a timely Notice of Allowance in this case.

Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee due in this matter.

Respectfully submitted,
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Date: 5-30-03


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